

What is claimed is:

1. A boron-containing dispersant composition comprising one or more dispersants that are the reaction product of a polyalkenyl-substituted mono- or dicarboxylic acid, anhydride or ester; and a polyamine, at least one of said dispersants having a polyalkenyl moiety with a number average molecular weight of at least about 1800, and from greater than about 1.3 to about 1.7 mono- or di-carboxylic acid producing moieties per polyalkenyl moiety; a ratio of wt.% of boron to wt.% of nitrogen (B/N) for said dispersant composition being from about 0.05 to about 0.24.

2. The dispersant composition of claim 1, wherein said B/N ratio is from about 0.10 to about 0.15.

3. The dispersant composition of claim 1, wherein said polyalkenyl-substituted mono- or dicarboxylic acid, anhydride or ester is polyisobutene succinic anhydride.

4. The dispersant composition of claim 1, wherein said polyamine has on average from about 6 to about 7 nitrogen atoms per molecule.

5. The dispersant composition of claim 1, wherein at least one of said dispersants has from greater than about 1.3 to about 1.6 mono- or dicarboxylic acid producing moieties per polyalkenyl moiety.

6. The dispersant composition of claim 1, wherein said polyamine comprises at least one primary amine moiety, and at least one of said dispersants has from about 0.8 to about 1.0 succinyl moieties per primary amine moiety of said polyamine.

7. The dispersant composition of claim 1, comprising at least a first borated dispersant having less than 1.3 mono- or dicarboxylic acid producing moieties per polyalkenyl moiety and a second, non-borated dispersant having a polyalkenyl moiety with a number average molecular weight of at least about 1800 and from greater than about 1.3 to about 1.7 mono- or dicarboxylic acid producing moieties per polyalkenyl moiety.

8. The dispersant composition of claim 1, wherein boron is provided to said composition by a boron source other than a borated dispersant.
9. The dispersant composition of claim 8, wherein said boron source is selected from the group consisting of borated dispersant VI improver; alkali metal, mixed alkali metal or alkaline earth metal borate; borated overbased metal detergent; borated epoxide; borate ester; and borate amide.
10. The dispersant composition of claim 1, comprising a first, borated dispersant having a B/N ratio of from about 0.4 to about 1.2 and a functionality of less than 1.3, and a second, unborated dispersant having a polyalkenyl moiety with a number average molecular weight of at least about 1800 and a functionality of from greater than about 1.3 to about 1.7.
11. The dispersant composition of claim 1, wherein at least 30 wt. % of said dispersant composition comprises dispersant having a polyalkenyl moiety with a number average molecular weight of at least about 1800 and from greater than about 1.3 to about 1.7 mono- or di-carboxylic acid producing moieties per polyalkenyl moiety.
12. The dispersant composition of claim 1, wherein the polyalkenyl moiety of at least one of said one or more dispersants has a number average molecular weight (M_n) of from about 1800 to about 3000.
13. The dispersant composition of claim 12, wherein said polyalkenyl moiety has a molecular weight distribution (M_w/M_n) of from about 1.5 to about 2.0.
14. The dispersant composition of claim 1, wherein the boron content of said composition is from about 0.1 to about 0.8 wt. %, based on the total weight of active dispersant.

15. A lubricating oil composition comprising a major amount of oil of lubricating viscosity and a minor amount of a dispersant composition of claim 1.

16. The lubricating oil composition of claim 15, wherein said oil of lubricating viscosity is a Group 3 oil, a Group 4 oil, a Group 5 oil, or a mixture thereof.

17. The lubricating oil composition of claim 16, wherein said oil of lubricating viscosity has a Noack volatility of not greater than 13.5% and a viscosity index (VI) of at least 120.

18. The lubricating oil composition of claim 17, wherein said composition has a Noack volatility of not greater than 12%.

19. The lubricating oil composition of claim 16, further comprising minor amounts of at least one additional additive selected from the group consisting of molybdenum-containing antiwear agents, friction modifiers or antioxidants, calcium salicylate detergents, nitrogen-containing friction modifiers and multifunctional viscosity modifiers.

20. The lubricating oil composition of claim 15, wherein the phosphorous content of said lubricating oil composition is no greater than 0.08 wt. %, based on the total weight of said lubricating oil composition.

21. A lubricating oil composition comprising a major amount of oil of lubricating viscosity and from about 0.5 to about 7 wt. %, based on the total weight of the lubricating oil composition, of active dispersant composition of claim 1

22. An additive concentrate comprising from about 40 to 90 wt. % of a normally liquid, substantially inert, organic solvent or diluent, and from about 10 to about 60 wt. % of active additives including a dispersant composition of claim 1.

23. A method of improving cleanliness of the pistons of an internal combustion engine in operation, said method comprising lubricating said engine with a lubricating oil composition as claimed in claim 15.